



Riparian Vegetation



















What's the Difference?



A scenic landscape photograph showing a narrow stream flowing through a field of tall, golden-brown grass. The stream is surrounded by dense vegetation, including tall grasses and some trees with autumn-colored leaves. In the background, a forested hill rises under a clear blue sky. The text "Kinds and Amouts of VEGETATION" is overlaid in yellow, with "Amouts" being a misspelling of "Amounts".

# Kinds and Amouts of VEGETATION

# The Role of Vegetation in Riparian Function

- Protect banks
- Stabilize channels
- Dissipate energy:
  - Slow velocity
  - Drop sediment
  - Stabilize sediment
  - Build floodplain

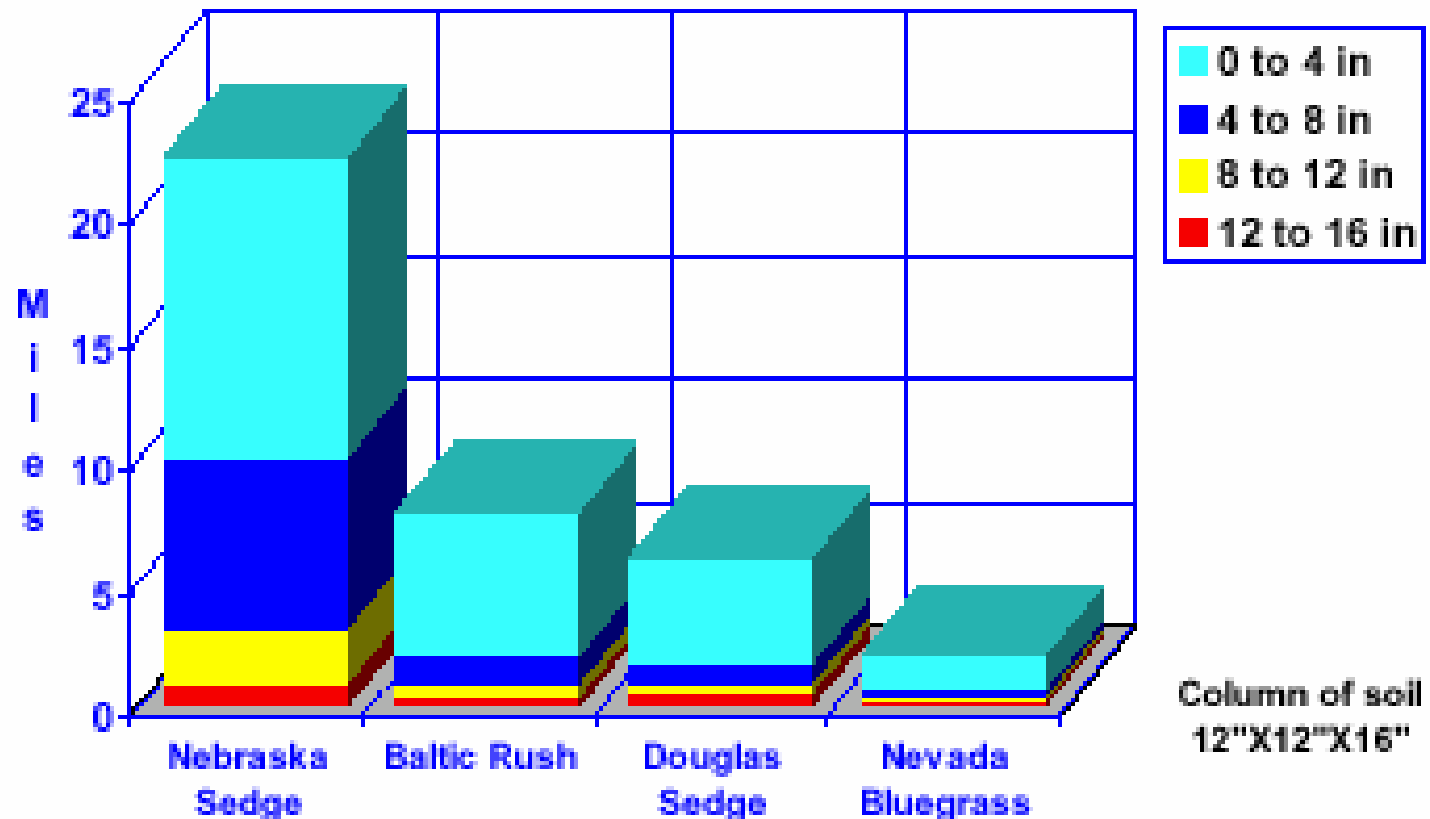
# Build Floodplain:

- Increase water storage capacity (sponge)
- Increase recharge
- Absorb floodwater
- Prolonged flow

# Riparian Vegetation

1. Slow the water down
2. Retain water on the land longer

# Root Length



Manning, M.E., et al, 1989

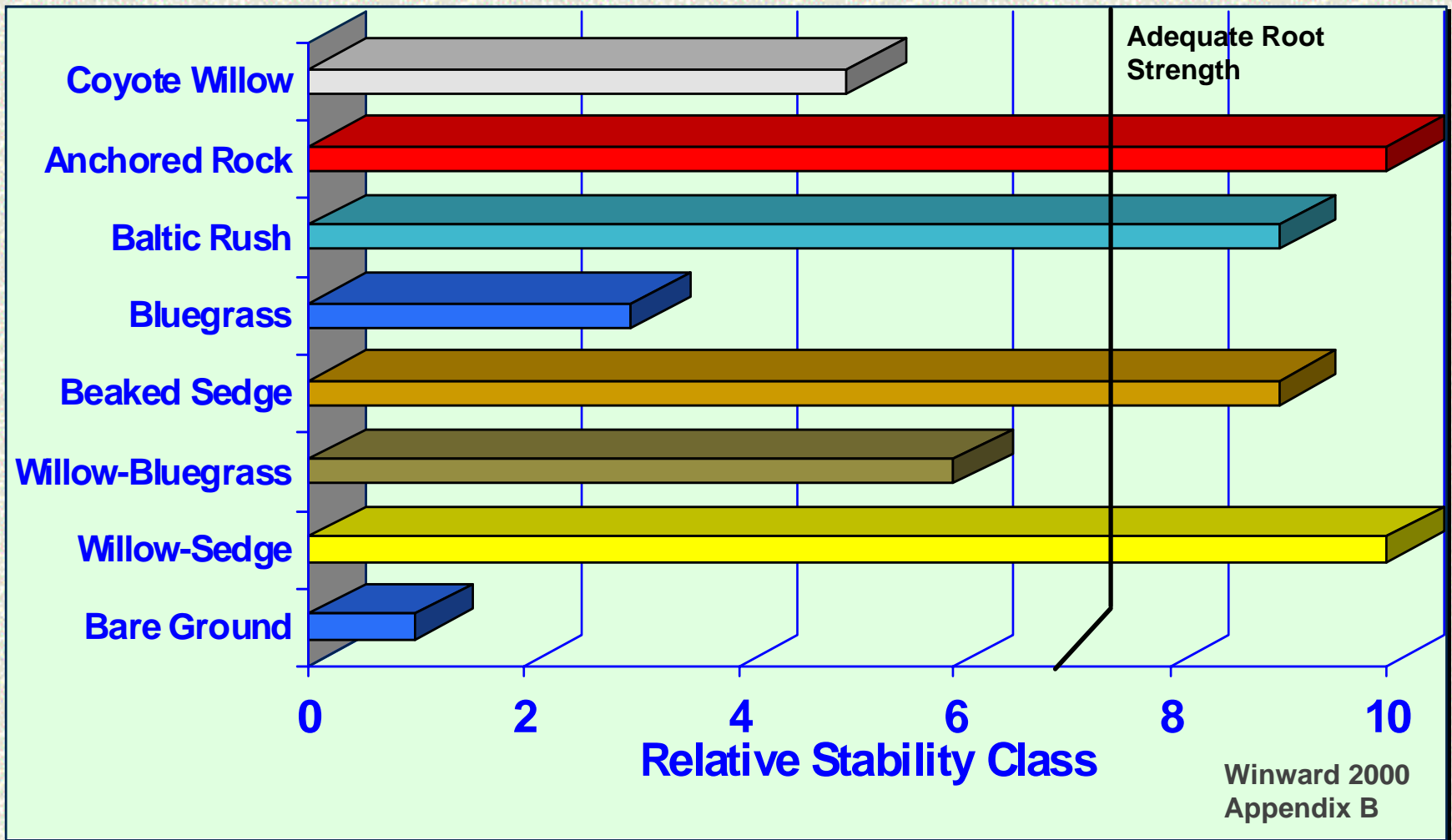
# Plant Vigor-Leaves and Roots

*Caring for the Green Zone, Riparian Areas and Grazing Management*

**Alberta Riparian Habitat Management Project, “Cows and Fish Project”**



# Channel Stability Rating (Vegetation)



# 3 Types of Vegetation



# Colonizers



# Knotgrass



# Knotgrass





Colonizer Sedge

# Water Hyssop (*Bacopa*)





Water Hyssop + Spikerush

# Spikerush



# Spikerush





The image shows several clumps of Emory sedge (Carex emoryi) growing in a natural, rocky, and sandy environment. The plants have long, narrow, green leaves that are slightly curved. The ground is covered with small, light-colored rocks and patches of sand. The lighting is bright, suggesting a sunny day, and the overall scene is a close-up of the vegetation.

Stabilizer – Emory sedge





Emory sedge

# Sawgrass (*Cladium*)







Switchgrass  
*Panicum virgatum*



Switchgrass

# Switchgrass



# Switchgrass





# Deergrass





# Bushy bluestem



# Bushy bluestem











# Woody Vegetation



# Sycamore (*Platanus*)





Willow    *Sauz*    *Salix*





# Willow Regeneration



# Heavy Browsing







Willow — Trunk sprouting



Cottonwood



# Buttonbush (*Cephalanthus*)





# Buttonbush – Heavy browsing



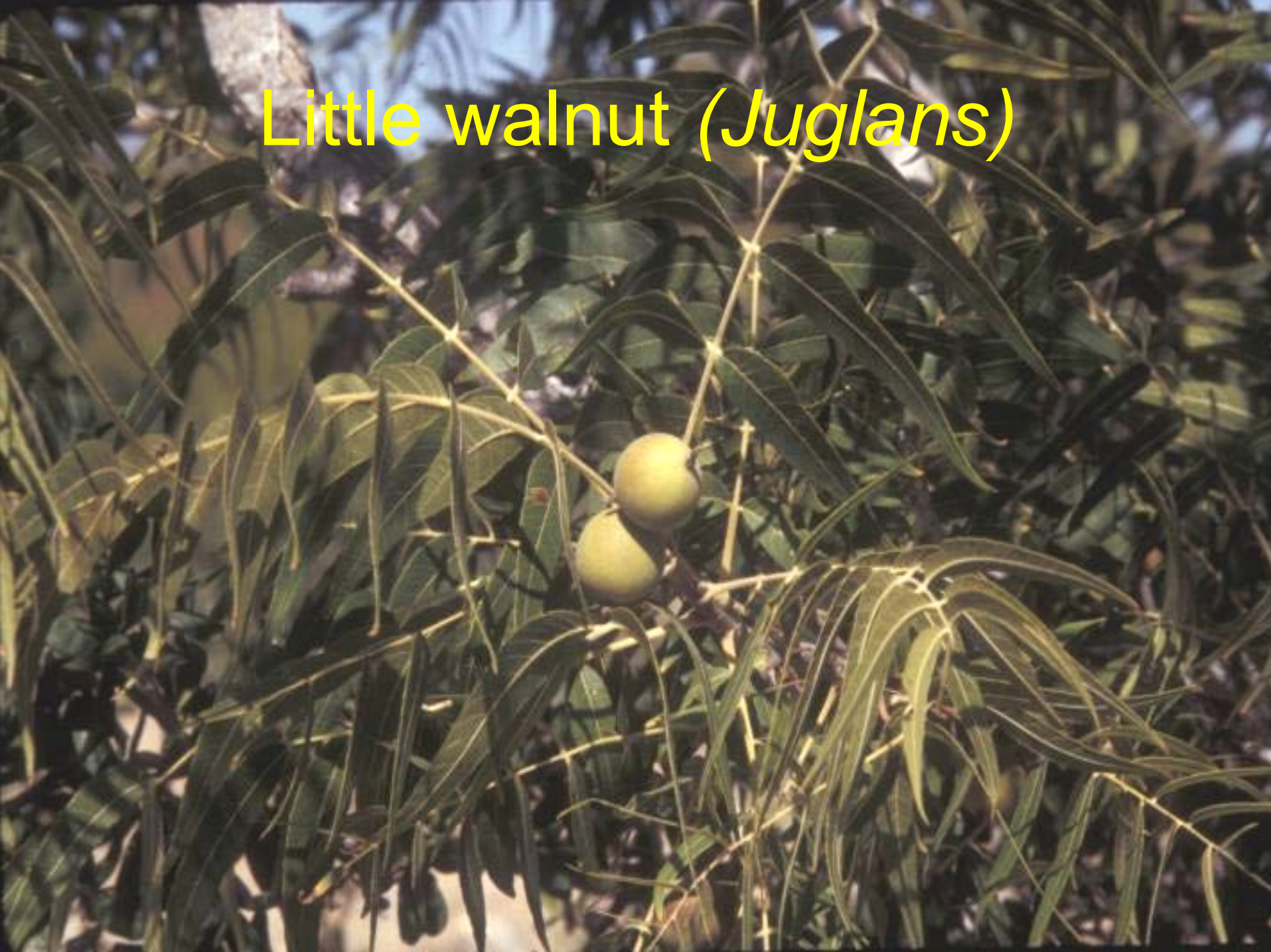
# Indigobush (*Amorpha*)





Buttonbush + Indigobush

# Little walnut (*Juglans*)





# Baccharis Jara





Baccharis

# Spikerush + Deergrass + Baccharis



# Bricklebush



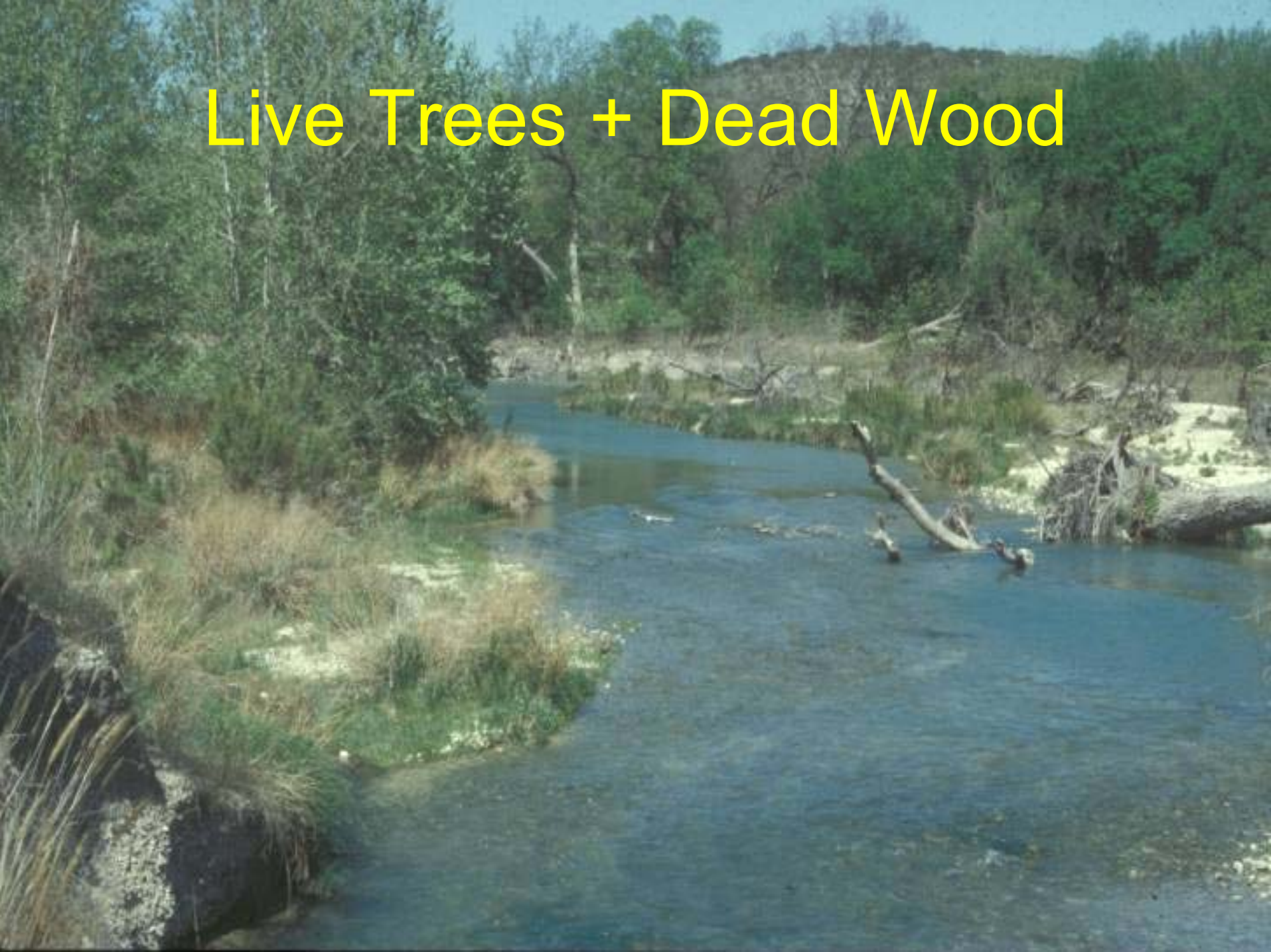
# Burrobush







# Live Trees + Dead Wood



A white, conical bucket is placed on a dark, fine-grained sediment surface. Several clumps of sparse, green and brown vegetation are scattered around the bucket. The scene is brightly lit, casting a shadow from the bucket onto the sediment.

Catch sediment































Bad News, and Good News













# The Right Kinds and Amounts of Vegetation - Critical











# Sugarberry (*Celtis*)





Elm (Ulmus)

A wide, muddy river flows through a landscape with bare trees and grassy banks. The water is a turbid brown color, indicating high sediment content. The river is flanked by dense clusters of leafless trees on the left and a line of trees with some dry grass on the right. The sky is overcast and grey.

Concho River  
1 Rainfall Event  
7400 Ac/ft of Runoff  
34,000 Tons Soil





